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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Heinz Bannasch

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EXAMINER

TROY, DANIEL J

ART UNIT

PAPER NUMBER

3641

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/574,532	Applicant(s) BANNASCH ET AL.	
	Examiner DANIEL J. TROY	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. DETAILED ACTION

2. *Claim Objections*

3. Claim 13 is objected to because of the following informalities: "which allow to generate" is grammatically incorrect. Appropriate correction is required.

4. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim reads "may be" and therefore none of the claim elements are positively required by the claim; it is further noted that claim 13 already requires the ammunition types "RF, IR, and combined RF/IR ammunitions".

5. *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

7. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13, 15, 18, 19, and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann ("tarnen und Tauschen bei der Marine" - applicant's admitted prior art in the specification) in view of Salzeder (US Publication Number 2002/0149510 A1) in further view of Kravitz (US Publication Number 2007/0163430).

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9. Regarding claim 13, Herrmann discloses, a system for protecting ships against terminal homing phase-guided missiles comprising a target data analysis system (Page 3 L19-21) comprising a computer (Page 3 L24) sensors for detecting terminal homing phase-guided missiles and its expected trajectory (Page 3 L23); means to measure the wind speed and direction (P3 L29-30); motion and/or navigation sensors for detecting the ship's own data: traveling speed, direction of travel, rolling and pitching motions (Page 3 L31-33); a fire control calculator which inherently communicates with the computer (Page 4 L1-4); at least one decoy launcher arranged on the ship and dirigible in azimuth and elevation (Page 3 L27), but lacks an ammunition types comprise RF, IR, and combined RF/IR ammunitions as well as unfolding reflectors; the computer including a database in which appropriate decoy patterns for the respective missile type and the respective attack structure are stored which allow to generate a particular decoy pattern.

10. Salzeder teaches that it is known in the art to have a target data analysis for discriminating between genuine and spurious target; ammunition types comprise RF, IR, and combined RF/IR ammunitions (P [0038]) as well as reflectors (P [0048]). The use of a target data analysis for discriminating between genuine and spurious target; ammunition types comprise RF, IR, and combined RF/IR ammunitions as well as reflectors which allow to generate a particular decoy pattern conserves decoy ammunition by only firing target relevant decoys.

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Herrmann, by using a target data

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analysis for discriminating between a genuine and spurious target; ammunition types comprise RF, IR, and combined RF/IR ammunitions and reflectors as taught by Salzeder, to conserve decoy ammunition.

12. Kravitz teaches that it is known in the art to have a database with appropriate decoy patterns and respective attack structures are stored (para. [0030-0031] and figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Hermann and Salzeder, by using a database with appropriate decoy patterns and respective attack structures as taught by Kravitz, to save time and prioritize attacks to better protect the ship.

13. Regarding claims 15, 24, and 25, Salzeder teaches the decoy ammunitions comprise integrated delay elements freely programmable by means of the fire control (P [0050] describes the “walk-off” which includes delays programmed in the ammunitions). Noting that the velocity of departure is dependent on the target and therefore Salzeder is capable of firing decoys with the same departure velocity.

14. Regarding Claim 18 Herrmann, Salzeder, and Kravitz disclose the claimed invention except for NTDS, RS22, RS422, EHTERNET, IR, or BLUETOOTH data interfaces. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use NTDS, RS22, RS422, EHTERNET, IR, or BLUETOOTH data interfaces since it was known in the art that any of these listed data interfaces can be used to transfer data from one device to another.

15. Regarding claim 19, Salzeder teaches radar reflectors (P [0031]).

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16. Regarding claim 26, Hermann teaches the fire control calculator transmitting the determined data for deploying the decoy formation to the decoy launchers (Page 4 L3-4). A standardized data interface is inherent to any electronic system, having a non-standardized data interface would only increase the complication of the system by including unnecessary conversion.

17. Claims 14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann ("tarnen und Tauschen bei der Marine" - applicant's admitted prior art) in view of Salzeder (US Publication Number 2002/0149510 A1) in view of Kravitz (US Publication Number 2007/0163430) in further view of Graf et al. (US Patent Publication 2007/0151493 A1).

18. Regarding claim 14, Salzeder teaches, a launching platform capable of carrying a single decoy ammunition, an electric launching means ("computer" P [0025]) capable of launching a single decoy ammunition in temporal intervals (P [0050]), an elevation drive and an azimuthal drive (P [0050]), a base platform for receiving the drives, and a suitable interface which transmits the delay time ("timing" P [0050]) to the decoy ammunition, but lacks shock absorbers and STEALTH trimmings.

19. Graf teaches that it is known in the art to use shock absorbers (Abstract) and STEALTH trimmings (P [0030]). The use of shock absorbers and STEALTH trimmings provide better stabilization of the system as well as reduce the risk of enemy detection.

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Herrmann in view of Salzeder, by using

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shock absorbers and STEALTH trimmings similar to that disclosed by Graf, to provide better stabilization of the system as well as reduce the risk of enemy detection.

21. Regarding claim 27, it is obvious that the trimmings would be formed obliquely because this is the normal manner in which they are used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use metallic and carbon fiber, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

22. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann ("tarnen und Tauschen bei der Marine" - applicant's admitted prior art) in view of Salzeder (US Publication Number 2002/0149510 A1) in view of Kravitz (US Publication Number 2007/0163430) in further view of Darnall (US Patent Number 7086318 B1).

23. Regarding claim 16, Herrmann in view of Salzeder discloses an apparatus as described previously, but lacks a drive with an angular acceleration of at least $50 \frac{\text{deg}}{\text{s}^2}$.

24. Darnall teaches that it is known in the art to use a drive with an angular acceleration of at least $50 \frac{\text{deg}}{\text{s}^2}$ (C3 L38). The use of a drive with an angular acceleration of at least $50 \frac{\text{deg}}{\text{s}^2}$ can help the system quickly reach the desired firing position.

25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Herrmann in view of Salzeder, by using

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a drive with an angular acceleration of at least $50 \frac{\text{deg}}{\text{s}^2}$ similar to that disclosed by

Darnall, to help the system quickly reach the desired firing position.

26. Claims 17 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann ("tarnen und Tauschen bei der Marine" - applicant's admitted prior art) in view of Salzeder (US Publication Number 2002/0149510 A1) in view of Kravitz (US Publication Number 2007/0163430) in further view of Maury (US Patent Number 4222306).

27. Regarding claims 17 and 28, Herrmann in view of Salzeder discloses an apparatus as described previously, but lacks the use of the ship's on-board reconnaissance radars.

28. Maury teaches that it is known in the art to use of the ship's on-board reconnaissance radars (C13 L41-46). The use of the ship's on-board reconnaissance radars reduces cost by only using one radar system.

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Herrmann in view of Salzeder, by using the ship's on-board reconnaissance radars similar to that disclosed by Maury, to reduce costs.

30. Claims 20-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann ("tarnen und Tauschen bei der Marine" - applicant's admitted prior art) in view of Salzeder (US Publication Number 2002/0149510 A1) in view of Kravitz (US Publication Number 2007/0163430) in further view of Thornburg (US Patent Number 4852456).

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31. Regarding claims 20, 22, and 23, Herrmann in view of Salzeder discloses an apparatus as described previously, but lacks unfolding by means of gases.

32. Thornburg teaches that it is known in the art to unfold by means of gases. The use of unfolding by gases provides a fast and reliable means for unfolding the decoy.

33. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Herrmann in view of Salzeder, by using gases as unfolding means similar to that disclosed by Thornburg, to provide a fast and reliable means for unfolding the decoy.

34. Regarding claim 21 Salzeder discloses a radar reflector (P [0031]).

35. *Response to Arguments*

36. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL J. TROY whose telephone number is (571)270-3742. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (571) 272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DJT/

/Michael J. Carone/
Supervisory Patent Examiner, Art Unit 3641